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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,617	01/31/2006	Hisatoshi Motoda	10873.1856USWO	7433
52835 7590 07/29/2009 HAMRE, SCHUMANN, MUELLER & LARSON, P.C. P.O. BOX 2902 MINNEAPOLIS, MN 55402-0902				
EXAMINER				
GRAY, JILL M				
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1794				
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07/29/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/566,617

**Applicant(s)**

MOTODA ET AL.

**Examiner**

Jill Gray

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Pursuant to the entry of the amendment of April 23, 2009, the status of the claims is as follows: Claims 21 and 23 have been cancelled. Claims 1, 4, 6, 18, 20, 24, and 29 are amended. Claims 1-20, 22, and 24-31 are pending and under prosecution.

***Response to Amendment***

2. The rejection of claims 1, 3-4, 6-14, and 17-19 under 35 U.S.C. 102(b) as being anticipated by vonBlucher et al., 4,610,905 is withdrawn in view of applicants' amendments.
3. The rejection of claims 1-2, 4-6, 8, and 17-19 under 35 U.S.C. 102(b) as being anticipated by Ninomiya et al., 6,174,949 is withdrawn in view of applicants' amendments.
4. The rejection of claims 1, 4, 6, 8-9, 11, and 15-19 under 35 U.S.C. 102(a) and (e) as being anticipated by Swoboda et al., US 2003/0152724 A1 is moot in view of applicants' amendments.
5. The rejection of claims 20-31 under 35 U.S.C. 103(a) as being unpatentable over Swoboda et al., US 2003/0152724 A1 is moot in view of applicants' amendments.

***Claim Rejections - 35 USC § 102***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
7. Claims 1-2, 4-6, 8-11, 17, 20, 24, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Publication JP-2000-215872 (machine

translation) and translated excerpts provided by applicants (herein after referred to as "the translation").

Regarding Independent claims 1, 4, 20 and 24

The translation discloses a nonwoven fabric having ion exchange grains anchored on the fibers surface of the fabric. The fabric is formed from polyolefin fibers that preferably are bicomponent fibers having as one component a polymer or copolymer that forms an adhesive in wet heat and serves to fix the particles to the adhesive component. See entire document and [0009], [0010], and [0013]. It should be noted that the term "conjugate fiber" includes bicomponent fibers. Regarding claims 20 and 24, the translation is as set forth above and further discloses a method for producing a filler-affixed fiber and fiber structure comprising providing a filler dispersed solution in which the filler is dispersed to the bicomponent fiber and then subjected to wet adhesion at an elevated temperature. See [0032].

Regarding the requirement that the binder is a heat and humidity gelling resin, the translation discloses that the polymer or copolymer that forms an adhesive in wet heat can be ethylene-vinyl alcohol copolymer. See claim 2 of translation. Absent any other distinguishing characteristics of present claims 1, 4, 20 and 24, the examiner has reason to believe that the ethylene-vinyl alcohol copolymer that forms an adhesive component when subjected to heat and humidity of the prior art is substantially the same as that heat and humidity gelling resin fiber component contemplated by applicants. Accordingly, the examiner has reason to believe that the prior art composition forms a gel when subjected to heat and humidity thereby allowing the

grains to become affixed to the binder resin. "Products of identical chemical composition can not have mutually exclusive properties." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are provided by identical or substantially identical processes, a *pima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). The burden is upon the Applicant to prove otherwise.

Note MPEP 2112.01

Regarding dependent claims 2, 5-6, 8-11, 17 and 28

The translation discloses that:

Claims 2 and 5 – the resin is ethylene-vinyl alcohol copolymer resin. See claim 2

Claim 6 – that the nonwoven fabric comprises the aforementioned bicomponent fiber and at least another fiber and heat-and-humidity gelling resin. See entire document, and Examples.

Claims 8 and 9 – that the prior art grains are inorganic particles such as titanium oxide and alumina (aluminum oxide). See [0013].

Regarding claims 10 and 11 – the prior art discloses inorganic grains that are of the same type contemplated by applicants as being abrasive particles, such as alumina

(aluminum oxide) and titanium oxide as required by present claim 10 and porous particles (titanium oxide) claim 11.

Regarding claim 17, the language of "wherein the fiber structure is compression molded and affixed in the direction of thickness" is a process limitation within a product claim, wherein patentability is based upon the product itself. It is the product that must be distinguished from the prior art product.

Regarding claim 28, the translation discloses that the filler particles are dispersed in water. See [0032].

Therefore, the teachings of the translation anticipate the invention as claimed in present claims 1-2, 4-6, 9-11, 17, 20, 24, and 28.

### ***Claim Rejections - 35 USC § 103***

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
9. Claims 3, 7, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Publication JP-2000-215872 (machine translation) and translated excerpts provided by applicants (herein after referred to as "the translation"), as applied above to claims 1-2, 4-6, 9-11, 17, 20, 24, and 28 in view of von Blucher et al., 4,610,905 as applied in the previous Office Action.

#### **Regarding dependent claims 3, 7 and 12-14**

The translation is as set forth above but does not specifically teach the average particle size of the grains or that they can be activated carbon.

von Blucher teaches yarn coated with active particles, wherein the particles are adhered using a binder resin that can be fusion adhesive. In addition, von Blucher teaches that the particles can be activated carbon, and have a diameter of from 10 to 100 $\mu$ m.

Regarding claims 3 and 7, it is the examiner's position that this requirement is drawn to the size of the particles. It is the position of the examiner that where there is not substantive change in function or properties of the particles, a change in size is not construed to be a matter of invention in the absence of factual evidence to the contrary of unexpected or superior properties directly related to the specific particle size. Alternatively, von Blucher teaches particles having a diameter within the present claimed range as being suitable in the formation filler affixed fiber articles. This teaching would have provided motivation to the skilled artisan for the usage of particles having diameters within the present claimed range.

Regarding claim 12, von Blucher teaches the utility of activated carbon particles. This teaching would have provided direction to the skilled artisan to modify the teachings of the translation by using an adsorbent material such as activated carbon.

Regarding claims 13 and 14, these claims are drawn to the future intended use of the nonwoven web. Accordingly, these requirements are not found to be limiting in providing distinguishing characteristics of the present claimed fiber structure from the prior art fiber structure.

Therefore, the combined teachings of the translation and the von Blucher would have rendered obvious the invention as claimed in present claims 3, 7, and 12-14.

10. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Publication JP-2000-215872 (machine translation) and translated excerpts provided by applicants (herein after referred to as "the translation"), as applied above to claims 1-2, 4-6, 9-11, 17, 20, 24, and 28, in view of European Patent Publication EP 432,489.

The translation is as set forth above and incorporated herein but does not the inclusion of other hydrophilic fibers. EP '489 teaches heat-adhesive composite fibers comprising bicomponent fibers having an ethylene-vinyl alcohol copolymer constituent that is exposed to outside of the fiber in at least a portion of the peripheral surface. See abstract. In addition, EP '489 teaches the formation of nonwoven fabrics wherein hydrophilic fibers such as cotton or rayon are mixed in to produce nonwoven fabric having high mechanical strength. See page 5, lines 41-49. It would have been obvious to the skilled artisan to modify the teaching of the translation by including hydrophilic fibers such as cotton or rayon to increase the mechanical strength of the nonwoven fabric.

Therefore, the combined teachings of the translation and EP'489 would have rendered obvious the invention as claimed in present claims 15 and 16.

11. Claims 18-19, 22, 25-27, and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over, in view of PCT Publication WO 95/06769 (Foster).

The translation is as set forth previously and incorporated herein. In addition, the translation discloses that the fiber webs are processed by methods such as heat calendar treatment, hot blast treatment and high-pressure-water style treatment. See



[0018]. The translation does not specifically teach a fiber molded body (claim 18) and method of making said molded body (claim 29). In addition, the translation is silent as to the specifics of the wet heat process.

Regarding Independent claims 18 and 29

The translation is as set forth above but does not specifically teach a fiber molded body and method of producing a fiber molded body.

Foster teaches a method for bonding a fiber assembly and fiber assembly formed therefrom comprising impinging a high steam temperature jet on the assembly to melt a melt component to fuse fibers together, more specifically, to form a fiber molded body. See abstract. In addition, Foster teaches that the melt component may be a melt fiber that is a bicomponent fiber having at least one thermoplastic component.

Regarding claim 18, it would have been obvious to the skilled artisan to form the fiber web using a high pressure water treatment as disclosed by the translation. Note [0018]. The method of Foster meets this description, i.e. a high steam temperature jet and thus is substantially the same as that disclosed by the translation, wherein said method of Foster results in a fiber molded body. Therefore, a fiber molded body would have been obvious to the skilled artisan in view of the combined teachings of the translation and Foster.

Regarding claim 29, Foster additionally teaches that the jets may be in an apertured platen which can be raised from and lowered on top of the web. See page 6. This teaching would render obvious the method steps of "performing a heat and humidity mold processing on the fiber structure in a metal die".

Therefore, the combined teachings of the translation and Foster would have rendered obvious the invention as claimed in present claims 18 and 29.

Regarding dependent claims 19, 22, 25-26, and 30-31

Regarding claim 19, the language of “wherein the fiber molded body is molded by contact pressure mold processing” is a process limitation within a product claim, wherein patentability is based upon the product itself. It is the product that must be distinguished from the prior art product. Nevertheless, Foster teaches contact pressure mold processing.

Regarding claims 22 and 25, this required temperature range would have been obvious to the skilled artisan to achieve the desired bonding of the fiber structure while maintaining structural integrity. Also, Foster teaches that spot bonding can be performed as well, which would desirably necessitate controllable melt temperatures.

Regarding claims 26 and 30-31, the teachings of Foster of a platen that is raised and lowered on top of the web (page 6) would render this requirement obvious.

Regarding claim 27, Foster teaches that the jets contain steam or super heated steam. See page 2.

Therefore the combined teachings of the translation and Foster would have rendered obvious the invention as claimed in present claims 19, 22, 25-26, and 30-31.

***Response to Arguments***

12. Applicant's arguments with respect to claims 1-31 have been considered but are moot in view of the new ground(s) of rejection.

13. Applicants amendments to claims 1, 4, 18, 20 and 29 requiring a conjugate fiber formed of a fiber and binder resin, wherein the conjugate fiber includes a heat-and-humidity gelling resin fiber component and another thermoplastic synthetic fiber component has substantially changed the scope of these claims as originally filed and necessitated in this new grounds of rejection.

***Conclusion***

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-Th and alternate Fridays 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on 571-272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jill Gray/  
Primary Examiner  
Art Unit 1794

jmg